CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

Job No.: CTCE/BBMP/W.No.02/L/CSR.1/749c/CEMENT/2014-15

Date: 31.01.2015

TEST REPORT ON CEMENT

*** CUSTOMER**	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
***AGENCY**	:	**Mr. Lingaraju,** # 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.
***NAME OF THE WORK**	:	Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
REFERENCE	:	AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015
SAMPLE ID	:	Cement – (Sample – 2)
SAMPLE RECEIVED ON	:	28.01.2015
PERIOD OF TESTING	:	28.01.2015 to 31.01.2015

The results of the tests conducted on the cement sample are as follows:

Sl. No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 8112-2013
1	Standard Consistency	IS-4031 (Part -4) 1988(RA-2009)	30.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5) 1988(RA-2009)	155 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5) 1988(RA-2009)	470 Minutes	Not More than 600 Minutes
3	Soundness by Le Chartlier Method	IS-4031 (Part-3) 1988(RA-2009)	1 mm	Not more than 10

*Information is furnished by the Customer/Representative.

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AE 2 @ AEE

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Job No.: CTCE/BBMP/W.No.02/L/CSR.1/749c/SAND-Gradation/2014-15 : 31.01.2015

TEST REPORT ON DETERMINATION GRADATION OF FINE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Lingaraju,**
# 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.

*** Name of Work** : Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015

Technical Reference : IS : 2386 Part 1 - 1963 RA-2007

Sample ID : Fine Aggregates – (Sample – 2)

Sample Received on : 28.01.2015

Date of Testing : 31.01.2015

Total Wt. of Aggregates in gms **1000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS 383-1970 (RA- 2007)			
		Zone-I	Zone-II	Zone-III	Zone-IV
10	100	100	100	100	100
4.75	93.66	90-100	90-100	90-100	95-100
2.36	80.01	60-95	75-100	85-100	95-100
1.18	56.53	30-70	55-90	75-100	90-100
600 Micron	25.24	15-34	35-59	60-79	80-100
300 Micron	12.60	5-20	8-30	12-40	15-50
150 Micron	3.35	0-10	0-10	0-10	0

* Information is furnished by the Customer/Representative

Remarks : This sample is under Zone-I specific limits.

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AE2 @ AEE2

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Job No.: CTCE/BBMP/W.No.02/L/CSR.1/749c/AGG/GR/2014-15 : 31.01.2015

TEST REPORT ON DETERMINATION GRADATION OF COARSE AGGREGATES

*** Customer** : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Lingaraju,**
# 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.

*** Name of Work** : Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

Reference : AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015

Technical Reference : IS : 2386 Part 1 -1963 RA-2007

Sample ID : Coarse Aggregates (20mm) – (Sample – 2)

Sample Received on : 28.01.2015

Date of Testing : 31.01.2015

Total Wt. of Aggregates in gms= **5000**

Is Sieve Size in mm	Cumulative Weight Passing in %	Specific Limits as per IS :383-1970 (RA- 2007)	
		Graded	Single Sized
40	100	100	100
20	97.96	95-100	85-100
10	32.66	25-55	0-20
4.75	4.16	0-10	0-5

* Information is furnished by the Customer/Representative

Remarks : This sample is under Graded specific limits

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Job No.: CTCE/BBMP/W.No.02/L/STEEL/2014-15 05.02.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Lingaraju,** # 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.
Name of the work	:	Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015
Date of Test	:	05.02.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	10	0.62	513	556	13.50	O.K	O.K

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CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 : 2005

Job No.: CTCE/BBMP/W.No.02/L/STEEL/2014-15 05.02.2015

TEST REPORT ON REINFORCEMENT STEEL

Customer	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Lingaraju,** # 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.
Name of the work	:	Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Reference	:	AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015
Date of Test	:	05.02.2015
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm²	Tensile strength (Ultimate stress) N/mm²	Elongation percent gauge length		
1	12	0.89	515	558	13.85	O.K	O.K

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Job No.: CTCE/BBMP/W.No.02/L/CSR.1/749c/Pre slab/2014-15

20.02.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

* Name of Client	:	**Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.
* Name of Agency	:	**Mr. Lingaraju,** # 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.
* Name of work	:	Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.
Referece	:	AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015
Techinical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on		10.02.2015
Date of Testing	:	20.02.2015
Grade of Concrete	:	M_{30}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	77.00	0.386	2553.09	1.54	0.955	32.65	16.63	17.96	17.15	21.44
2	50.00	79.00	0.397	2559.37	1.58	0.960	32.80	16.70	18.04	17.32	21.65
3	50.00	80.00	0.408	2597.41	1.60	0.965	33.55	17.09	18.45	17.81	

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Job No.: CTCE/BBMP/W.No.02/L/CSR.1/749c/CUBE/2014-15 09.03.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Lingaraju,**
# 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.

*** Name of the work** : Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

*** Reference** : AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015

*** Sample ID** : RCC Drain Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{20}

Compressive Strength as o : 28^{th} day

Sample Received on : 09.02.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	09.02.2015	09.03.2015	8.265	487.2	21.65
2	09.02.2015	09.03.2015	8.374	501.4	22.28
3	09.02.2015	09.03.2015	8.415	512.6	22.78

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Job No.: CTCE/BBMP/W.No.02/L/CSR.1/749c/CUBE/2014-15 25.03.2015

TEST REPORT ON COMPRESSIVE STRENGTH OF CONCRETE CUBES

*** Customer** : **Asst. Executive Engineer,** Yelahanka Sub Division, BBMP, Bangalore.

*** Agency** : **Mr. Lingaraju,**
# 95, 5th Cross, C.T. Bed, B.S.K 2nd Stage, Bangalore.

*** Name of the work** : Improvements to Drains at 13th D Cross Roads of Eastern Side Kondappa Layout in Ward No.02 of Yelahanka Sub Division, BBMP, Bangalore.

*** Reference** : AEE/BBMP/YSD/AE-2/2014-15 Dated: 28.01.2015

*** Sample ID** : Cement Concrete

Size of cubes : 150mmx150mmx150mm

Cross Sectional Area : 22500 mm^2

Technical Reference : IS: 516-1959 (Reaffirmed 2008)

*** Grade of Concrete** : M_{30}

Compressive Strength as o : 28^{th} day

Sample Received on : 25.02.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	25.02.2015	25.03.2015	8.367	726.3	32.28
2	25.02.2015	25.03.2015	8.526	748.5	33.27
3	25.02.2015	25.03.2015	8.429	733.7	32.6

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AE-2

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